

Claims

1. An inking system for an intaglio printing machine, said inking system comprising at least a duct (1; 10) for inking the surface of an engraved selective inking cylinder (5; 13; 34, 35, 36, 37) which in turn inks the surface of a plate cylinder (16; 23; 28; 39) of the intaglio printing machine via a chablon roller (17; 21; 24; 40, 41, 42, 43) having reliefs (18; 22; 25) corresponding to engravings (27; 38) to be inked on said plate cylinder (16; 23; 28; 39), wherein said inking system further comprises a wiping system (8, 9) for wiping the surface of said selective inking cylinder and recuperating the wiped ink in the duct (1; 10).
2. The inking system according to claim 1, wherein said duct (1) includes a duct roller (2) for applying ink to the surface of said selective inking cylinder (5; 34, 35, 36, 37).
3. The inking system according to claim 2, wherein the duct roller (2) is coated with hard plastic or rubber.
4. The inking system according to claim 1, wherein said duct (10) is formed by an ink chamber (11) with an ink spray device (12) for applying ink to the surface of said selective inking cylinder (13).
5. The inking system according to claim 4, wherein said spray device (12) is synchronized with the rotation of the selective inking cylinder (13) in order to avoid ink application in non-engraved areas of the selective inking cylinder (13).

6. The inking system according to claim 1, wherein said selective inking cylinder (5; 13; 34, 35, 36, 37) carries an engraved plate (6).

7. The inking system according to claim 1, wherein said wiping system includes a wiping roller (8).

8. The inking system according to claim 7, wherein said wiping system further comprises a scraping blade (9) for scraping the surface of said wiping roller (8).

9. The inking system according to claim 7, wherein said wiping roller (8) is a dry wiping roller.

10. The inking system according to claim 7, wherein the wiping roller (8) rotates in the same direction as the selective inking cylinder (5; 13; 34, 35, 36, 37).

11. The inking system according to claim 7, wherein the wiping roller (8) is coated with hard plastic or rubber.

12. The inking system according to claim 7, wherein the wiping roller (8) is coated with ink repellent material.

13. The inking system according to claim 7, wherein the wiping roller (8) is driven by independent driving means.

14. The inking system according to claim 1, wherein said chablon roller (17; 24; 40, 41, 42, 43) indirectly inks the surface of said plate cylinder (16; 28; 39) via a collector cylinder (19; 26; 44).

15. The inking system according to claim 1, wherein said selective inking cylinder (5) inks said chablon roller (21) via a transfer cylinder (20).

16. The inking system according to claim 1, wherein said wiping system (8, 9) is adapted to leave a slight amount of ink on non-engraved areas of the selective inking cylinder (5), which amount of ink is sufficient to ink fine engravings on said plate cylinder (16; 23; 28; 39).

17. An intaglio printing machine for printing sheets or webs of securities, such as banknotes, checks, passports, ID and other similar objects, comprising at least a feed unit, an impression cylinder (31; 42) and a plate cylinder (28; 39) carrying at least one plate, a printing nip (30; 41) being formed between the plate cylinder (28; 39) and the impression cylinder (31; 42), wherein said printing machine comprises an inking system according to one of the preceding claims.

18. The intaglio printing machine according to claim 17, comprising a plurality of inking systems (30, 31, 32, 33) with respective ducts (2), wiping systems (8, 9), selective inking cylinders (34, 35, 36, 37) and chablon rollers (40, 41, 42, 43) which ink a common collector cylinder (44).

19. The intaglio printing machine according to claim 18, wherein each selective inking cylinder (34, 35, 36, 37) only has an engraved pattern which corresponds to the color the selective inking cylinder is meant to transfer.

20. The intaglio printing machine according to claim 18, wherein all selective inking cylinders (34, 35, 36, 37)

have the same engraved pattern and wherein each chablon roller (40, 41, 42, 43) only transfers the necessary ink to the collector cylinder (44).